

Step 10(a). For an Energy Efficiency Standard, compute the lower control limit (LCL₂) for the mean of the combined first and second samples using the DOE energy efficiency standard (EES) as the desired mean and a one-tailed probability level of 97.5 percent (equivalent to the two-tailed probability level of 95 percent used in Step 5) as follows:

$$LCL_2 = EES - ts_{\bar{x}_2} \quad (9a)$$

where the t-statistic has the value obtained in Step 5.

Step 10(b). For an Energy or Water Consumption Standard, compute the upper control limit (UCL₂) for the mean of the combined first and second samples using the DOE energy or water performance standard (EPS) as the desired mean and a one-tailed probability level of 102.5 percent (equivalent to the two-tailed probability level of 95 percent used in Step 5) as follows:

$$UCL_2 = EPS + ts_{\bar{x}_2} \quad (9b)$$

where the t-statistic has the value obtained in Step 5.

Step 11(a). For an Energy Efficiency Standard, compare the combined sample mean (\bar{x}_2) to the lower control limit (LCL₂) to find one of the following:

(1) If the mean of the combined sample (\bar{x}_2) is less than the lower control limit (LCL₂) or 95 percent of the applicable energy efficiency standard (EES), whichever is greater, i.e., if $\bar{x}_2 < \max(LCL_2, 0.95 \text{ EES})$, the basic model is in noncompliance and testing is at an end.

(2) If the mean of the combined sample (\bar{x}_2) is equal to or greater than the lower control limit (LCL₂) or 95 percent of the applicable energy efficiency standard (EES), whichever is greater, i.e., if $\bar{x}_2 \geq \max(LCL_2, 0.95 \text{ EES})$, the basic model is in compliance and testing is at an end.

Step 11(b). For an Energy or Water Consumption Standard, compare the combined sample mean (\bar{x}_2) to the upper control limit (UCL₂) to find one of the following:

(1) If the mean of the combined sample (\bar{x}_2) is greater than the upper control limit (UCL₂) or 105 percent of the applicable energy or water performance standard (EPS), whichever is less, i.e., if $\bar{x}_2 > \min(UCL_2, 1.05 \text{ EPS})$, the basic model is in noncompliance and testing is at an end.

(2) If the mean of the combined sample (\bar{x}_2) is equal to or less than the upper control limit (UCL₂) or 105 percent of the applicable energy or water performance standard (EPS), whichever is less, i.e., if $\bar{x}_2 \leq \min(UCL_2, 1.05 \text{ EPS})$, the basic model is in compliance and testing is at an end.

Manufacturer-Option Testing

If a determination of non-compliance is made in Steps 6, 7 or 11, the manufacturer may request that additional testing be con-

ducted, in accordance with the following procedures.

Step A. The manufacturer requests that an additional number, N_3 , of units be tested, with N_3 chosen such that $N_1+N_2+N_3$ does not exceed 20.

Step B. Compute the mean energy or water performance, standard error, and lower or upper control limit of the new combined sample in accordance with the procedures prescribed in Steps 8, 9, and 10, above.

Step C. Compare the mean performance of the new combined sample to the revised lower or upper control limit to determine one of the following:

a.1. For an Energy Efficiency Standard, if the new combined sample mean is equal to or greater than the lower control limit or 95 percent of the applicable energy efficiency standard, whichever is greater, the basic model is in compliance and testing is at an end.

a.2. For an Energy or Water Consumption Standard, if the new combined sample mean is equal to or less than the upper control limit or 105 percent of the applicable energy or water consumption standard, whichever is less, the basic model is in compliance and testing is at an end.

b.1. For an Energy Efficiency Standard, if the new combined sample mean is less than the lower control limit or 95 percent of the applicable energy efficiency standard, whichever is greater, and the value of $N_1+N_2+N_3$ is less than 20, the manufacturer may request that additional units be tested. The total of all units tested may not exceed 20. Steps A, B, and C are then repeated.

b.2. For an Energy or Water Consumption Standard, if the new combined sample mean is greater than the upper control limit or 105 percent of the applicable energy or water consumption standard, whichever is less, and the value of $N_1+N_2+N_3$ is less than 20, the manufacturer may request that additional units be tested. The total of all units tested may not exceed 20. Steps A, B, and C are then repeated.

c. Otherwise, the basic model is determined to be in noncompliance.

[63 FR 13321, Mar. 18, 1998]

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AUTHORITY: 42 U.S.C. 6311–6316

SOURCE: 64 FR 54141, Oct. 5, 1999, unless otherwise noted.

Subpart A—General Provisions

§ 431.1 Purpose and scope.

This part establishes the regulations for the implementation of Part C of Title III of the Energy Policy and Conservation Act, as amended, 42 U.S.C. 6311–6316, which establishes an energy conservation program for certain industrial equipment.

§ 431.2 Definitions.

The following definitions apply for purposes of this part. Any words or terms not defined in this Section or

elsewhere in this Part shall be defined as provided in Section 340 of the Act.

Act means the Energy Policy and Conservation Act of 1975, as amended, 42 U.S.C. 6291–6316.

Btu means British thermal unit, which is the quantity of heat required to raise the temperature of one pound of water by one degree Fahrenheit.

Covered equipment means any electric motor, as defined in § 431.12, or commercial heating, ventilating, and air conditioning, and water heating product (HVAC & WH product), as defined in § 431.72.

DOE or the Department means the U.S. Department of Energy.

EPCA means the Energy Policy and Conservation Act, as amended, 42 U.S.C. 6291–6316.

Gas means propane or natural gas as defined by the Federal Power Commission.

ISO means International Organization for Standardization.

Manufacture means to manufacture, produce, assemble, or import.

Manufacturer means any person who manufactures industrial equipment, including any manufacturer of a commercial packaged boiler.

Secretary means the Secretary of Energy.

State means a State, the District of Columbia, Puerto Rico, or any territory or possession of the United States.

State regulation means a law or regulation of a State or political subdivision thereof.

[69 FR 61923, Oct. 21, 2004]

Subpart B—Electric Motors

SOURCE: 69 FR 61923, Oct. 21, 2004, unless otherwise noted.

§ 431.11 Purpose and scope.

This subpart contains energy conservation requirements for electric motors. It contains test procedures that EPCA requires DOE to prescribe, related requirements, energy conservation standards prescribed by EPCA, labeling rules, and compliance procedures. It also identifies materials incorporated by reference in this part.